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ENTOMOSPORIUM MACULATUM, Lév. On *Amelanchier alnifolia.*
BOTRYTIS LUPINI, E. & E. On *Lupinus leucophyllus.*
DIDYMARIA CLEMATIDIS, Cke. & Hark. *Clematis ligusticifolia.*
OIDIUM ERYSIPHOIDES, Fr. On *Echinospermum Redowskii.*
HETEROSPORIUM CLEOMIS, E. & E. n. sp. *Cleome integrifolia.*
RHYTISMA SALICINUM, Tr. On *Salix flavescens* var.
DERMATIA POPULINA, Schw. On *Populus tremuloides.*

SUPPLEMENTARY NOTES.

By F. W. ANDERSON.

The foregoing list was kindly sent to me by the Rev. F. D. Kelsey, with the request that I add any names and notes at my command. Having in 1887 spent several months collecting in the vicinity of Helena in company with Mr. Kelsey, and collected in the same neighborhood again in 1888, it is with pleasure I add the following:

Although the combined list is small, it extends the ranges and hosts of some species, besides giving a few new to science.

ÆCIDIUM CLEOMIS, Ell. & Anderson. On *Cleome integrifolia.* Appearing chiefly on young plants, affecting the leaves and petioles, and occasionally the stems.

ÆCIDIUM COMPOSITARUM, Mart. Very abundant on *Troximon glaucum*, often destroying leaves of feeble hosts. Same on *Solidago rigida.*

ÆCIDIUM LEPIDII, Tracy & Galloway. On *Lepidium intermedium.* A beautiful scarlet species, the broad, white marginal lobes contrasting strongly with the rich color below. Not very common.

ÆCIDIUM MONOICUM, Pk. On *Sisymbrium linifolium.* One of the earliest to appear. Changes structure of host leaves, causing them to become oval or roundish in outline and much thickened and brittle, margin strongly recurved. Preceded by the remarkably fragrant spermogonia which exude a sticky fluid with a perfume between that of the English Sweet Violet and Hedge Primrose. This fluid is very attractive to beetles, flies, bees, and ants. A destructive fungus having several known hosts and which may in time, perhaps, attack cultivated *Cruciferæ.*

ÆCIDIUM URTICÆ, Schum. On *Urtica gracilis*, was very abundant in Oro Fino Gulch, near Helena, in 1887. It damaged its host considerably.

PHRAGMIDIUM POTENTILLÆ, (Pers.) Wint. On *Potentilla Pennsylvanica* and *P. dissecta* (mountain form). Common and very conspicuous. The rich reddish, orange-colored uredospores are frequently present with the large, black, velvety teleuto-sori, forming a marked contrast.

PUCCINIA ABERRANS, Pk.? On *Sisymbrium linifolium.* Succeeding *Æcidium monoicum* as a rule, but sometimes appearing on the same leaves while the latter is at its best. This is said to differ from the type. I have a typical specimen of this *Puccinia* on the first published host. I also have it varying more or less from the type form on several hosts in other genera from Colorado, Washington Territory, and Utah. No two are alike but all are evidently of one species. The form on *Sisymbrium linifolium* seems to fit in with the rest and if another species it is closely related to *P. aberrans.*

PUCCINIA CARICIS, (Schum.) Wint. On *Carex Jamesii* var. *Nebraskensis, Carex filifolia, Carex Douglasii, Carex Pennsylvanica, Carex marcida* and *Carex utriculata.* The other *Carices* of this locality do not seem to be affected by the parasite.

PUCCINIA CLADOPHILA, Pk. On *Stephanomeria minor.* Very abundant at the summit of Mt. Helena. It also occurs on *S. runcinata.*

PUCCINIA RUBIGO-VERA, (DC.) Wint. On *Agropyrum divergens, Elymus condensatus, Kœleria cristata,* and several other grasses.

PUCCINIA FLOSCULOSORUM, (A. & S.) Wint. On *Troximon glaucum.* That this host occurs in Montana is doubted by some, but it certainly does. Rev. F. D. Kesley also has the fungus on this host.

PUCCINIA GALIORUM, Lk. On *Galium boreale.* Rather uncommon.

PUCCINIA GILIÆ, Pk. ? On *Phlox cæspitosa* var. *condensatus.* Common and very destructive to host.

PUCCINIA GRAMINIS, Pers. On *Agropyrum violaceum.* Common.

UROMYCES ERIOGONI, Ell. & Hark. On *Eriogonum umbellatum.* Apparently rare in this vicinity.

UROMYCES JUNCI, (Desm.) Wint. On *Juncus longistylis.* The fungus has been present wherever I have found this host in Montana, but I have not succeeded in finding it upon another host, even of the same genus.

UROMYCES TEREBINTHI, (DC.) Wint. On *Rhus toxicodendron.* Not abundant.

UROCYSTIS COLCHICI, (Schl.) Wint. In the leaf tissue of *Smilacina stellata* growing in shady places.

USTILAGO SEGETUM, (Bull.) Wint. On *Hordeum jubatum.* More common on this host than upon cultivated cereals.

TUBERCULINA PERSICINA, (Ditm.) Sacc. On the cups of *Æcidium porosum* Pk. on *Vicia Americana* var. *linearis.* Common.

TUBERCULINA VINOSA, Sacc. ? On *Lactuca pulchella* with *Æcidium hemisphæricum* Pk. Common.

ERYSIPHE CICHORACEARUM, DC. On *Aster longifolius, A. commutatus Chrysopsis villosa,* and *Cnicus undulatus.* Very common.

ERYSIPHE COMMUNIS, (Wallr.) Fr. On *Vicia Americana,* var. *linearis, Oxytropis Lamberti,* and *Ranunculus repens.* Very scarce here on the *Oxytropis.*

PHYLLACTINIA SUFFULTA, (Reb.) Sacc. On *Typha latifolia.* Rather common on this host in a marsh along Ten-mile Creek near Helena.

SHPÆROTHECA CASTAGNEI, Lév. On *Ribes floridum* in damp woods. Common.

PERONOSPORA GANGLIFORMIS, (Berk.) DBy. On *Lactuca pulchella.* Rather frequent on hosts growing along the borders of the damp woods and thickets.

PERONOSPORA MYOSOTIDIS, DBy. On *Echinospermum Redowskii* Leh. and *Echinospermum floribundum.* Common and extremely injurious to the former host, often killing it; more uncommon on the latter and usually less harmful.

PERONOSPORA PYGMEÆ, Unger. On upper leaves of *Anemone multifida.* I found this only on one occasion, viz. near the summit of Mount Helena, June 8, 1887.

CRYTOSPHÆRIA MILLEPUNCTATA, Grev. On bark of *Populus tremuloides.* Common.

VALSA LEUCOSTOMA, (Pers.) Fr. On bark of *Prunus Virginiana.* Common.

DIDYMOSPHÆRIA EURYASCA, Ell. & Gal. On dead leaves of *Pinus Murrayana,* at the summit of Mount Helena.

PLEOSPORA HERBARUM, (Pers.) Rabh. On dead stems and leaves of *Cymopteris bipinnatus, Actinella acaulis, Aplippapus integrifolius, Oxytropis Monticola,* and many other plants.

PLEOSPORA PERMUNDA, (Cke.) Sacc. On *Clematis ligusticifolia.*

PHLEOSPORA OXYTROPIDIS, Ell. & Gal. On *Oxytropis Lamberti.* Quite destructive to the leaves and flower stalks of host, causing the leaflets to fall away and the flowering peduncles to dry up.

PENIOPHORA OCCIDENTALIS, E. & E. On bark of *Salix amygdaloides* and *Prunus Virginiana.*

SPHÆRIA (DOTHIDEA) LACTUCARUM, Schw. On *Lactuca pulchella.* Common and injurious to the host.

CLAVICEPS PURPUREA, (Fr.) Tul. On *Agropyrum violaceum* and on *A. divergens.*

Plowrightia fruticola, E. & E. On dead stems of *Clematis ligusticifolia.*

Plowrightia morbosa, (Schw.) Sacc. On branches of *Prunus Virginiana.* Common.

Plowrightia symphoricarpi, Ell & Gal. On dead stems of *Symphoricarpus occidentalis.* Common.

Cincinnobolus cesatii, DBy. In the hyphæ and conidia of *Erysiphe cichoracearum* DC. and on *Cnicus undulatus.* I found these specimens near Helena in October of last year. Of all the *Erysiphe* on various hosts I have collected in various parts of Montana this was the only specimen bearing this secondary parasite.

Phoma thermopsidis, Ell. & Gal. On dead stalks of *Thermopsis rhombifolia.* I found this on an old stalk attached to a fine Phænogamic specimen given me by my friend, Kelsey.

Rhinotrichum Curtisii, Berk. On old logs in damp situations, apparently very partial to charred wood.

Zygodesmus obtusus, E. & E. On dead wood of *Populus monilifera.*

Cladosporium graminum, Corda. On *Poa tenuifolia.* Common.

Cladosporium herbarum, (Pers.) Lk. Common on dead or diseased stems and leaves of various plants.

Cladosporium typharum, Desm. On *Typha latifolia.* Common.

Macrosporium iridis, C. & E.? On *Iris Missouriensis.* Common and destructive.

Macrosporium inquinans, C. & E. On dead stems of *Helianthus annuus.*

Crucibulum vulgare, (Tul.). On dead sticks of *Juniperus Virginiana,* also on twigs buried in damp soil. Rather common in moist, shady places on Mt. Helena.

Cyathus vernicosus, (Bull.) DC. On moist ground, Mt. Helena. Fine specimens also grew in Mr. Kelsey's front lawn last summer, where the garden hose was habitually left upon the grass with the water gently flowing.

Phlebia merismoides, Fr. On dead bark of *Populus tremuloides* and *Salix flavescens.*

Trichoderma lignorum, (Tode.) Harz. On dead and decaying trunks of trees.

These names and notes have been culled from my note-book. Neither Mr. Kelsey nor myself have attempted any systematic work with the *Hymenomycetes,* owing to the great amount of time and work necessary for their successful preservation. But we have many edible species here, some kinds of which I have frequently eaten, and it is our hope this year to get together all the Hymenomycetous fungi we can find.

SOME FUNGI OF CUSTER COUNTY, COLO.

By T. D. A. Cockerell.

Mr. Anderson's interesting notes in the last number of the Journal suggest a few remarks on the fungi found here at 8,000 feet and upwards, because we have already all his species. *Claviceps purpurea* occurs with us as high as 8,400 feet, but is rather locally distributed. *Ustilago segetum,* contrary to Mr. Anderson's experience, is quite abundant and injurious to the grain crops, though varying in its destructiveness in different years. The threshing operations must tend greatly to disseminate the spores, which very readily fly into the air to the annoyance of those working round the machine.

We have two species of *Æcidium* that are puzzling, and I do not